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# H I G H P L A I N S C O N S E R V A T I O N I S T

United States Department of Agriculture  
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H. H. Finnell  
Regional Conservator

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## DETERMINE EROSION HAZARDS ON YOUR FARM NOW

H. H. Finnell, Regional Conservator

The season of opportunity for making advance preparation to leave the land in a safe condition during the coming windy season has passed. At this time each farmer could well spend a little time inspecting thoroughly every foot of land under his control, with the idea of observing the surface condition. It is now possible to judge quite accurately whether a piece of land will be safe against blowing in its present condition, or whether it may require some emergency treatment before the blowing season has passed.

The safest possible condition in which land may go into the winter is with an ample vegetative cover. This may be in the form of stubble of a previous crop left standing or only partially worked into the topsoil, or it may be in the form of a winter grain just recently sowed. In the latter case there may yet exist considerable uncertainty of the amount and effectiveness of fall growth which will be obtained.

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THE FUTURE

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If trash from the previous crop is lacking, the next safest condition would be that of a hard, cloddy surface exposure, particularly if ridged. The effect of both cloddy and ridged surface exposures are relatively temporary because weather may affect them, whereas a vegetative cover will resist decay throughout winter and spring.

The least safe condition in which land may go into the winter is with a smooth, bare surface exposure, either undisturbed or finely pulverized by cultivation.

Many degrees and combinations of wind resistant conditions are normally found in practice. The last possible chance to get vegetative cover will pass with the wheat sowing period for this year. Getting a stand of wheat and an adequate fall growth for ground cover depends much on a favorable moisture condition.

Land without vegetative cover must be watched closely through the winter and spring, and prompt attention given to emergency tillage if damages by blowing are to be avoided. An examination of fields at this time will reveal the weak spots and enable the farmer to be prepared in advance for emergency work, which may be required on short notice.

Those who have successfully made ready for the blow season by water conservation, the use of erosion resistant crops, and the preservation of the residues of such crops, either solid or in strip combination with fallow or other unprotected condition, are to be



congratulated. Their principal worries for the dirt storm period will be because of neighboring hazards, if any. Where a community has solidly taken advantage of previous opportunities to get ready for the winds, there is reason for unusual satisfaction, because real progress is being made.

Regardless of what might have been in any case the sensible attitude at this point is to face conditions as they are, recognizing the probability of trouble where it exists and try to be prepared to take care of it instead of just hoping the wind will fail to blow.

#### GRAZING STUBBLE AND STALK FIELDS

W. E. Connell - Range Division

In the fall and winter when native pastures are short and dry, the stockman is forced to supply additional forage. Supplemental feed has never been too abundant, and he instinctively holds what he has in reserve as long as possible. At this time of the year stubble and stalk fields are a most attractive source of forage and in most cases the temptation to utilize them to the fullest degree is too strong to resist. The inevitable result is a field bare of cover creating a "blow" hazard that affects the surrounding countryside. The maintenance of sufficient crop residue to hold the soil in place against the action of wind and water is an





essential part of good farming and ranching in this High Plains Area.

The question uppermost in the minds of farmers having stubble and stalk fields containing available forage should be, "How much of this residue is needed to hold the soil in place?", rather than, "How many head of livestock can this forage support?" The answer to this question will vary with local conditions as determined by the amount of stubble or stalks present. The safest thing to do is to keep livestock off entirely. However, where an excess of plant residue is present, it can be economically utilized as forage for livestock provided it is not eaten off so close as to leave the soil exposed to blowing. This means leaving an effective height and density of stubble, most of the available forage being restricted to the leaves rather than the stalks.

One of the big problems in this connection is the leasing of such lands for grazing. The lessee is interested in obtaining as much grazing as possible and in most cases is not concerned with the effect of over-grazing on the land. It is to the interest of the land owner to incorporate in the lease such grazing restrictions as may be necessary to maintain an effective cover on this land.



## RESERVE FEEDS TO CONTROL GRAZING

W. E. Connell - Range Division

Investigations have shown that over-grazing is the greatest single factor contributing to the denuded and eroding condition of most of the native grass lands in the High Plains. Authorities estimate that the average carrying capacity of pastures in this region has been reduced up to 50%. This condition has been aggravated by the drought of the past few years. The only way to maintain an effective stand of grass in a pasture is to seasonally regulate the number of livestock so that over-grazing is prevented, thus maintaining a maximum cover of desirable grasses and preventing erosion.

In order to furnish enough flexibility to allow a shifting of the number of livestock grazed as seasonal conditions demand, a reserve supply of feed should be stored and maintained at all times. If possible, this reserve feed should be raised on the farm in the form of soil erosion resisting crops such as grain sorghums, sudan grass, etc. However, whether this feed is produced on the farm or bought on the market, the maintenance of a reserve supply sufficient to maintain livestock needs for two years is good insurance against the effects of drought and scanty forage.

The best way to store up such a reserve is by use of silos. The trench silo is cheap and practical to use in this region. The labor and expense involved in constructing and filling silos can be justified from the standpoint of facilitating grazing control as fully as can the construction and distribution of stock watering places for the same purpose. Feed can be stored indefinitely as silage if properly put up. Information on constructing and filling silos can be obtained from county agents and state experiment stations.

